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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Jean-Marie Musslin

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COATS & BENNETT, PLLC
1400 Crescent Green, Suite 300
Cary, NC 27518

EXAMINER

ALLEN, CAMERON J

ART UNIT

PAPER NUMBER

1797

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DELIVERY MODE

04/27/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/583,702	Applicant(s) MUSSLIN ET AL.	
	Examiner CAMERON J. ALLEN	Art Unit 1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 December 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 12-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 12-32 and 35 is/are rejected.
- 7) ☐ Claim(s) 33-34 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

In view of the Appeal Brief filed on December 9, 2008, PROSECUTION IS
HEREBY REOPENED. New rejections are set forth below.

To avoid abandonment of the application, appellant must exercise one of the
following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply
under 37 CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed
by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and
appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth
in 37 CFR 41.20 have been increased since they were previously paid, then appellant
must pay the difference between the increased fees and the amount previously paid.

A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by
signing below:

/Walter D. Griffin/
Supervisory Patent Examiner, Art Unit 1797.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all
obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set
forth in section 102 of this title, if the differences between the subject matter sought to be patented and
the prior art are such that the subject matter as a whole would have been obvious at the time the
invention was made to a person having ordinary skill in the art to which said subject matter pertains.
Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 12-32 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuennen et al. US 2003/0015478 A1 in view of Trestman et al US 6,181,076 B1.

Regarding claims 12 and 21, Kuennen teaches a water treatment device/method comprising (0009) at least two discharge lamps for photo-chemically treating water; (Figure 5 #300 and 302 or 0077) but does not disclose the use of two starter circuits, one for warm up and the other for control.

The Trestman reference does disclose a first electrical circuit disposed in the immediate vicinity of the discharge lamps and

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electrically connected to the discharge lamps, wherein the first electrical circuit is configured to control a warm up phase of the discharge lamps (Column 2 lines 48-55 inverter circuit 4 for warm up); and a second electrical circuit disposed remotely from the discharge lamps and electrically connected to the first electrical circuit, wherein the second electrical circuit is configured to control an operational phase of the discharge lamps. (Column 2 lines 53-57 Control Circuit) Referring to the drawing in the prior art, one of ordinary skill will see that lamp 5 is located next to inverter circuit 4 in electrical communication with control circuit located between inverter 4 and the power source 1.

Regarding claims 13 and 22, Kuennen in view of Trestman disclose the water treatment device/method of claim 12 wherein at least two of the two or more discharge lamps are connected in series. (0077 Lamps 300 and 302)(Figure 6)

Regarding claims 14 and 23, Kuennen in view of Trestman disclose the water treatment device/method of claim 12 but does not teach wherein at least two of the two or more discharge lamps are connected in parallel. It would have been obvious to one of ordinary skill in the art at the time of the invention to place the discharge lamps are connected in parallel since it is within the skill of an ordinary person in the art to use known configurations to wire the lamps. Known examples of discharge lamps in parallel can be seen in US 6,593,704 column 5 line 13-19.

Regarding claim 15, Kuennen in view of Trestman disclose the water treatment device of claim 12 wherein the first electrical circuit comprises at least one capacitor electrically connected to at least one transformer. (0076 336 and 350)

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Regarding claim 16, Kuennen in view of Trestman disclose the water treatment device of claim 12 wherein the first electrical circuit is disposed immediately adjacent to the discharge lamps. (Figure 5 circuit 314)

Regarding claim 17, Kuennen in view of Trestman disclose the water treatment device of claim 12 wherein the discharge lamps comprise ultraviolet discharge lamps.(0077)

Regarding claim 18, Kuennen in view of Trestman disclose the water treatment device of claim 12 wherein the discharge lamps comprise mercury vapor discharge lamps. (0078)

Regarding claim 19, Kuennen in view of Trestman disclose the water treatment device of claim 12 wherein the first electrical circuit generates a voltage control signal, and wherein the voltage control signal controls the warm up phase of the discharge lamps. (0077)

Regarding claim 20, Kuennen in view of Trestman disclose the water treatment device of claim 12 wherein the first electrical circuit generates a current control signal, and wherein the current control signal controls the warm up phase of the discharge lamps. (0078)

Regarding claim 24, Kuennen in view of Trestman disclose the method of claim 21 wherein the two or more discharge lamps comprise two or more ultraviolet discharge lamps. (0073)

Regarding claim 25, Kuennen teaches a water treatment device comprising: two or more ultraviolet discharge lamps (0077); but does not disclose the use of two starter

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circuits, one for warm up and the other for control, or wherein the first circuit is disposed less than 0.5 meters from the two or more ultraviolet discharge lamps and wherein the second electrical circuit is disposed at least 2.0 meters from the UV discharge lamps.

The Trestman reference does disclose a first electrical circuit disposed in the immediate vicinity of the discharge lamps and

electrically connected to the discharge lamps, wherein the first electrical circuit is configured to control a warm up phase of the discharge lamps (Column 2 lines 48-55 inverter circuit 4 for warm up); and

a second electrical circuit disposed remotely from the discharge lamps and electrically connected to the first electrical circuit, wherein the second electrical circuit is configured to control an operational phase of the discharge lamps. (Column 2 lines 53-57 Control Circuit) Referring to the drawing in the prior art, one of ordinary skill will see that lamp 5 is located next to inverter circuit 4 in electrical communication with control circuit located between inverter 4 and the power source 1. It would have been obvious to one of ordinary skill in the art at the time of the invention to locate a circuit 0.5 meters from the UV lamps and the second 2 meters from the UV lamps, since it has been held that mere relocation of parts is within the ordinary skill of one in the art. MPEP 2144

Regarding claim 26, Kuennen in view of Trestman disclose the water treatment device of claim 25 wherein the first distance comprises a relatively small distance, and wherein the second distance comprises a relatively large distance. (0073)(0076 and 0077)

Regarding claim 27, Kuennen in view of Trestman disclose the water treatment

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device of claim 26 but does not teach wherein the first distance is generally less than 0.5 meters and wherein the second distance is generally greater than 2 meters. It would have been obvious to one of ordinary skill in the art to make the first distance generally less than 0.5 meters, and wherein the second distance is generally greater than 2 meters, since it has been held that location of parts of an invention is a matter of obvious design choice and it involves only routine skill in the art.

Regarding claim 28, Kuennen in view of Trestman disclose the water treatment device of claim 25 but does not teach wherein the first and second electrical circuits are separated by at least 1.5 meters. It would have been obvious to one of ordinary skill in the art to make the first distance generally less than 0.5 meters, and wherein the second distance is generally greater than 2 meters, since it has been held that location of parts of an invention is a matter of obvious design choice and it involves only routine skill in the art.

Regarding claim 29, Kuennen in view of Trestman disclose the water treatment device of claim 25 wherein at least two of the two or more ultraviolet discharge lamps are connected in series. (Figure 6)

Regarding claim 30, Kuennen in view of Trestman disclose the water treatment device of claim 25 but does not teach wherein at least two of the two or more ultraviolet discharge lamps are connected in parallel. It would have been obvious to one of ordinary skill in the art at the time of the invention to place the discharge lamps are connected in parallel since it is within the skill of an ordinary person in the art to use

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known configurations to wire the lamps. Known examples of discharge lamps in parallel can be seen in US 6,593,704 column 5 line 13-19.

Regarding claim 31, Kuennen in view of Trestman disclose the water treatment device of claim 13 wherein the first electrical circuit is located by the discharged lamps and includes a first capacitor (Trestman C5) in series with a transformer (T3); wherein the second electrical circuit is disposed from both discharge lamps and includes a power supply (1), a second capacitor (C2) in series with a first switch (s1) and a third capacitor (C4) in series with a second switch (S4), and an inductor (w1) in series with the second and third capacitors and the first and second switches. The combination does not disclose that the first circuit is disposed less than 0.5 meters from or that the second is at least two meters from the lamps. It would have been obvious to one of ordinary skill in the art to locate the first circuit 0.5 meters and the second at least 2 meters from the lamp, since it has been held that mere relocation of parts is within the ordinary skill of one in the art. MPEP 2144

Regarding claim 32, Kuennen in view of Trestman disclose the water treatment device of claim 31 but does not disclose including only two wires interconnecting the first electrical circuit with the second electrical circuit. It would have been obvious to one of ordinary skill in the art at the time of the invention to ascertain that the Trestman reference discloses through common knowledge the use of some type of wiring system. One of ordinary skill would recognize the connection of the circuit to the power source is

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a system of wires. It would have been an obvious matter of design choice to replace the wiring system in the Trestman reference with the two wire system, since the applicant has not disclosed that the wiring system solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with any type of known power source and known wiring configuration.

Regarding claim 35, Kuennen in view of Trestman disclose the method of claim 21 including placing the first electrical circuit close to the discharge lamps, and placing the second electrical circuit further from the discharge lamps, but does not disclose that the first circuit is disposed less than 0.5 meters from or that the second is at least two meters from the lamps. It would have been obvious to one of ordinary skill in the art to locate the first circuit .5 meters and the second at least 2 meters from the lamp, since it has been held that mere relocation of parts is within the ordinary skill of one in the art.

Allowable Subject Matter

Claims 33 and 34 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The prior art does not disclose wherein the first electrical circuit is disposed less than 0.5 meters from one of the discharge lamps and include first and second capacitors; and wherein the second electrical circuit is disposed at least 2.0 meters from the discharge lamps and includes a power supply and a third capacitor in series with a first switch and a fourth.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cameron J. Allen whose telephone number is 571-270-3164. The examiner can normally be reached on M-Th 9-7pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Walter Griffin can be reached on 571-272-1447. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

CJA

/Walter D. Griffin/
Supervisory Patent Examiner, Art Unit 1797